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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,404	10/22/2004	Tsuyoshi Kashima	885A.0002.U1(US)	4456

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EXAMINER	
BRANDT, CHRISTOPHER M	
ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/500,404	KASHIMA, TSUYOSHI	
	Examiner	Art Unit	
	Christopher M. Brandt	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 June 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This Action is in response to applicant's amendment / argument filed on October 29, 2007. **Claims 1-18** are now pending in the present application. **This Action is made FINAL.**

Response to Arguments

Applicant's arguments filed October 29, 2007 have been fully considered but they are not persuasive.

With regards to applicant's argument that Anderson in view of Cohen fail to disclose "counting the number of overlaps between a communication zone of one of the specified nodes and communication zones of other specified nodes for each specified node," the examiner respectfully disagrees. Anderson discloses that a favored service provider is similar to the partner service provider except that a coverage area of the favored service provider overlaps a coverage area of the home service provider. In addition, Anderson discloses that the first and second coverage areas may overlap one another if the service providers operate in different bands, where the mobile station determines the particular classification of the service providers by using transmitted channels from the base stations (column 3 lines 46-49, 53-61, column 4 lines 26-29). Moreover, the mobile station includes an overlap flag so that the mobile station can select the best service provider to indicate whether or not a less desirable coverage area overlaps a more desirable coverage area (column 5 lines 3-6). In other words, Anderson in fact discloses various flags (and an overlap counter) for specified base stations (i.e. specified nodes) in order to count the overlaps to determine the best service provider. Therefore, Anderson in view of Cohen discloses the limitation, "counting the number of overlaps between a communication zone of one

of the specified nodes and communication zones of other specified nodes for each specified node."

Claim Objections

Claims 11 and 12 are objected to because of the following informalities: On line 1 of claim 11 and claim 12, replace "note" with –node-. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 11, 12, 15-17 are rejected under 35 USC 103(a) as being unpatentable over **Anderson et al. (US Patent 6,148,198, hereinafter Anderson)** in view of **Cohen (US Patent 5,465,390)**.

Consider **claim 1 (and similarly applied to claim 15)**. Anderson discloses a method comprising node (column 1 lines 13-24):

identifying nodes present within a communication zone of a mobile node which moves among the identified nodes (column 5 lines 13-18, read as storing identifier codes in the IRDB database);

counting the number of overlaps between a communication zone of one of the identified nodes and communication zones of other identified nodes for each identified node (column 7 lines 1-3, read as the overlap counter is incremented by one); and

selecting, as a candidate node for communication with the mobile node next, the identified node in which the largest number has been counted, wherein the mobile node performs said identifying, said counting, and said selecting, the identified nodes dispersedly arranged (column 7 lines 4-13, read as the processor selects the best service based on the overlap counter exceeding a predetermined threshold, where the processor is within the mobile station (see figure 2)).

Anderson discloses the claimed invention except he fails to disclose **specifying** nodes (Anderson discloses identifying).

However, Cohen discloses specifying nodes (abstract, read as determining the geographical location and the technical characteristics).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Cohen into the invention of Anderson

in order to lay out / implement the infrastructure of a cellular communication network using a dynamic approach (abstract, column 3 lines 9-24).

Consider **claim 2**. Anderson discloses a method (column 1 lines 13-24) comprising:

identifying a first node present within a communication zone of the mobile node (column 5 lines 13-18, read as storing identifier codes in the IRDB database);

identifying a second node present within a communication zone of the neighbor node (column 4 lines 34-46, read as setting an overlap flag if first and second service providers operate within the same coverage area);

counting a number of specifications for each neighbor node (column 7 lines 1-3, read as the overlap counter is incremented by one); and

selecting, as a candidate node for communication with the mobile node, the neighbor node in which the number of the specifications in a predetermined order is large, wherein the mobile node moves among the neighbor nodes, the neighbor nodes being dispersedly arranged, wherein the mobile node performs said identifying the neighbor node with the communication zone of the mobile node, said identifying the neighbor node with the communication zone of the neighbor node, said counting, and said selecting (column 7 lines 4-13, read as the processor selects the best service based on the overlap counter exceeding a predetermined threshold, where the processor is within the mobile station (see figure 2)).

Anderson discloses the claimed invention except he fails to disclose **specifying** a node and a **neighbor** node.

However, Cohen discloses a neighbor node (column 3 lines 9-24, read as neighboring cells having common overlapping zones).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Cohen into the invention of Anderson in order to lay out / implement the infrastructure of a cellular communication network using a dynamic approach (column 3 lines 9-24).

Consider **claim 3 and as applied to claim 1**. Anderson and Cohen disclose wherein selection is not performed, if the specified node in which the largest number has been counted is the same as a node with which the mobile node is currently in communication (Cohen; column 11 lines 8-15).

Consider **claim 4 and as applied to claim 3**. Anderson and Cohen disclose wherein when there are a plurality of specified nodes in which the largest number has been counted, an arbitrary one node is selected (Anderson; column 7 lines 4-13).

Consider **claims 11, 12, and 17 and as applied to claims 1, 2, and 16, respectively**. Anderson and Cohen disclose wherein the method selects a node without using a received signal strength indicator (RSSI) (Anderson; column 6 lines 11-18).

Consider **claim 16 and as applied to claim 15**. Anderson and Cohen disclose wherein the apparatus is the mobile node which moves among the specified nodes (Anderson; column 2 lines 22-40, read as the mobile node is roaming).

Claims 5-8 are rejected under 35 USC 103(a) as being unpatentable over **Anderson et al. (US Patent 6,148,198, hereinafter Anderson)** in view of **Cohen (US Patent 5,465,390)** and further in view of **Hronek (US Patent 5,465,390)**.

Consider **claims 5 and 6 and as applied to claims 1 and 2**. Anderson and Cohen disclose the claimed invention except they fail to teach wherein the mobile node performs said specifying, said counting, and said selecting at predetermined periods.

However, Hronek discloses wherein the mobile node performs said specifying, said counting, and said selecting at predetermined periods (column 9 lines 36-42, read as a time-of-day based system to update the IRDB).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Hronek into the invention of Anderson and Cohen in order to dynamically maintain different Intelligent Roaming Database or Preferred Roaming Lists (PRL) in a mobile handset (abstract).

Consider **claim 7 and as applied to claim 5**. Anderson, Cohen, and Hronek disclose wherein the predetermined period is changed in accordance with a movement speed of the mobile node (Cohen; column 19 line 60 – column 20 line 2).

Consider **claim 8 and as applied to claim 5**. Anderson, Cohen, and Hronek disclose wherein the predetermined period is changed in accordance with an arrangement density of the plurality of nodes (column 2 lines 45-52).

Claims 9, 10, and 18 are rejected under 35 USC 103(a) as being unpatentable over **Anderson et al. (US Patent 6,148,198, hereinafter Anderson)** in view of **Cohen (US Patent 5,465,390)** and further in view of **Haas (US Patent 6,304,556 B1)**.

Consider **claims 9, 10, and 18 and as applied to claims 1, 2, and 17, respectively**. Anderson and Cohen disclose the claimed invention but fail to explicitly teach wherein the specified nodes are mobile nodes.

However, Hass teaches wherein the specified nodes are mobile nodes (figure 1, column 4 lines 47-56, read as ad-hoc network).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Haas into the invention of Anderson and Cohen in order to allow efficient and fast route discovery in the ad-hoc network communication environment (column 4 lines 47-56).

Claims 13 and 14 are rejected under 35 USC 103(a) as being unpatentable over **Anderson et al. (US Patent 6,148,198, hereinafter Anderson)** in view of **Cohen (US Patent 5,465,390)** and further in view of **Agrawala et al. (US PGPUB 2005/0020275 A1, hereinafter Agrawala)**.

Consider **claims 13 and 14 and as applied to claims 1 and 2, respectively**. Anderson and Cohen disclose the claimed invention but fail to explicitly teach wherein the specified nodes are uniformly dispersedly arranged.

However, Agrawala teaches wherein the specified nodes are uniformly dispersedly arranged (figure 1, paragraph 31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Agrawala into the invention of Anderson and Cohen in order to enable a wireless communication node to determine accurately and precisely the spatial locations of neighboring communications nodes distributed in three-dimensional space (paragraph 26).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to:**

Commissioner for Patents
P.O. Box 1450

Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street

Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Brandt whose telephone number is (571) 270-1098. The examiner can normally be reached on 7:30a.m. to 5p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Christopher M. Brandt

C.M.B./cmb

January 14, 2008

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